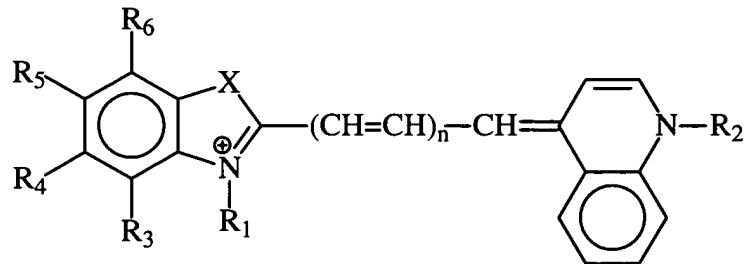


In the Claims:

Please add new claims 36-51

Please cancel claims 1-35 without prejudice

36. (New) A labelled oligonucleotide comprising:
an oligonucleotide; and
a reporter-quencher energy-transfer dye pair comprising a reporter dye and quencher dye wherein the quencher dye is an asymmetric cyanine dye compound having the structure:



and including any associated counter ions, wherein:

n ranges from 0 to 2;

X is O, S or Se;

R₁ is selected from the group consisting of methyl and a linking group, or when taken together with the proximate carbon of the methine bridge forms a ring structure having from 5 to 7 members;

R₂ is a linking group;

R₃ is hydrogen, or when taken together with R₄ forms a fused aromatic bridge substituted with one or more nitro groups;

R₄ is hydrogen, or when taken together with either R₃ or R₅ forms a fused aromatic bridge substituted with one or more nitro groups;

R₅ is nitro, or when taken together with either R₄ or R₆ forms a fused aromatic bridge substituted with one or more nitro groups; and

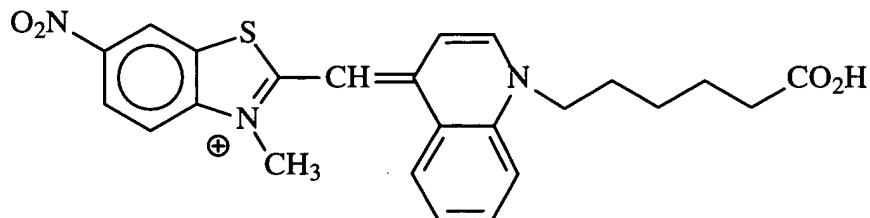
R₆ is hydrogen, or when taken together with either R₅ forms a fused aromatic bridge substituted with one or more nitro groups.

37. (New) The labelled oligonucleotide of claim 36 in which the reporter dye is selected from the group consisting of xanthene, coumarin, naphthylamine, cyanine and bodipy dyes.

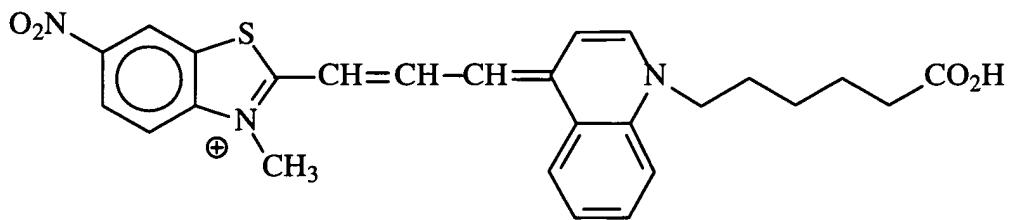
38. (New) The labelled oligonucleotide of claim 37 in which the reporter dye is a xanthene dye.

39. (New) The labelled oligonucleotide of claim 38 in which the xanthene dye is a fluorescein dye or a rhodamine dye.

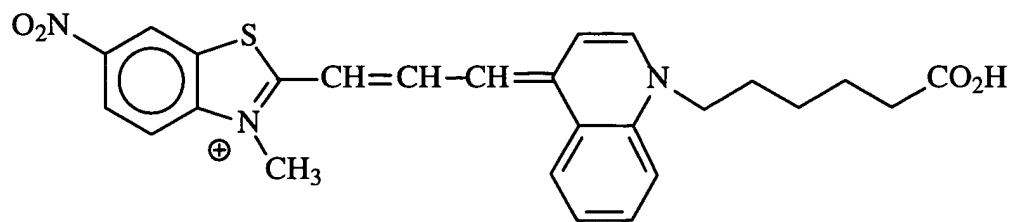
40. (New) The labelled oligonucleotide of claim 36 in which the reporter dye is 5- or 6-carboxy-fluorescein (FAM) and the quencher dye is of the formula:



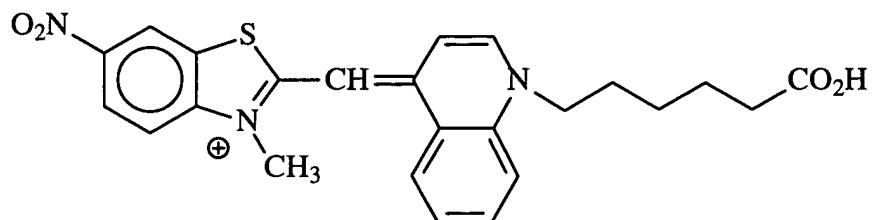
41. (New) The labelled oligonucleotide of claim 36 in which the reporter dye is selected from the group consisting of 5- or 6-carboxy-fluorescein (FAM), 2',4',1,4-tetrachlorofluorescein (TET) and 2'-chloro-5'-fluoro-7',8'-fused phenyl-1,4-dichloro-6-carboxyfluorescein (NED) and the quencher dye is of the formula:



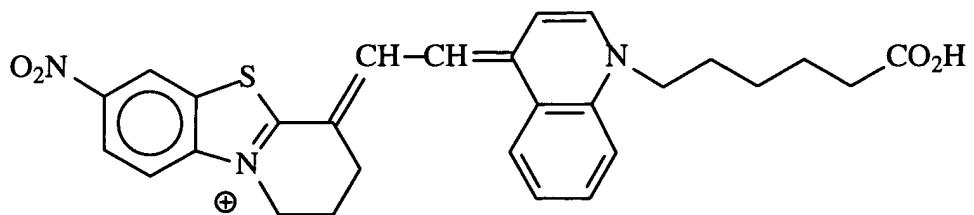
42. (New) The labelled oligonucleotide of claim 36 in which the quencher dye is of the formula:



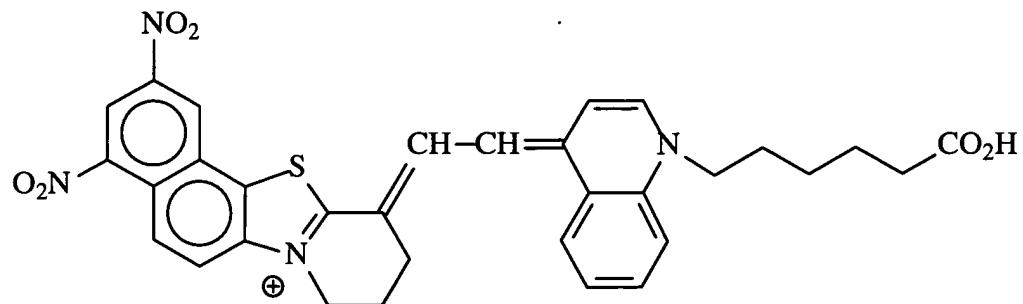
43. (New) The labelled oligonucleotide of claim 36 in which the quencher dye is of the formula:



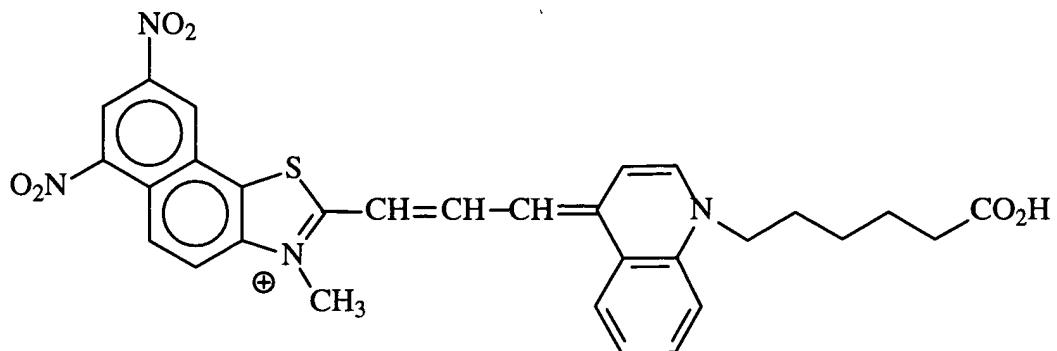
44. (New) The labelled oligonucleotide of claim 36 in which the quencher dye is of the formula:



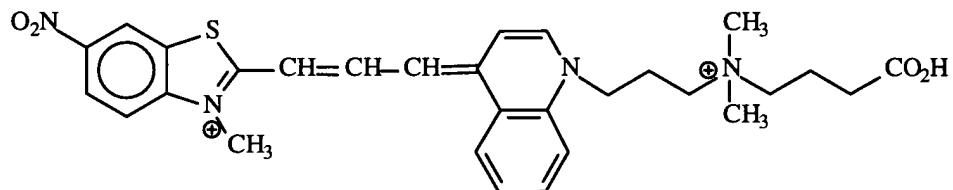
45. (New) The labelled oligonucleotide of claim 36 in which the quencher dye is of the formula:



46. (New) The labelled oligonucleotide of claim 36 in which the quencher dye is of the formula:



47. (New) The labelled oligonucleotide of claim 36 in which the quencher dye is of the formula:



48. (New) The labelled oligonucleotide of claim 36 wherein the location of the reporter dye and the quencher dye is such that when the labelled oligonucleotide is hybridized to a target nucleic acid sequence the reporter dye is not effectively quenched by the quencher dye, and when the labelled oligonucleotide is not hybridized to a target nucleic acid sequence the reporter dye is effectively quenched by the quencher dye.

49. (New) The labelled oligonucleotide of claim 36 wherein one of the reporter and quencher dyes is attached at a 3'-end of the oligonucleotide and the other is attached at a 5'-end of the oligonucleotide.

50. (New) The labelled oligonucleotide of claim 36 wherein the oligonucleotide sequence is designed such that a hairpin forms at the ends.